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January 25, 1994

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Mr. William Caton
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: ET Docket No. 93-62; Comments submitted
by E.F. Johnson Company

Dear Mr. Caton:

Transmitted herewith, on behalf of E.F. Johnson Company, are comments submitted in response to the Notice of Proposed Rule Making adopted in the above captioned proceeding, In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation.

If you should have any questions regarding this matter, please contact Russell H. Fox of this office, or the undersigned counsel.

Sincerely,



Susan H.R. Jones

Enclosure

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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Guidelines for Evaluating the)
Environmental Effects of)
Radiofrequency Radiation)

ET Docket No. 93-62

To: The Commission

COMMENTS OF THE E.F. JOHNSON COMPANY

The E. F. Johnson Company ("E.F. Johnson" or "the Company"), by its attorneys, pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission") hereby submits its Comments in response to the Notice of Proposed Rule Making ("NPRM") adopted in the above referenced proceeding^{1/} designed to amend and update the guidelines and methods used for evaluating the environmental effects of radiofrequency ("RF") radiation from FCC regulated facilities.

I. INTRODUCTION

E.F. Johnson is a leading designer and manufacturer of radio communications and specialty communications products for commercial and public safety use. Founded 70 years ago as an electronic components manufacturer, E.F. Johnson entered the radio communications equipment market in the late 1940's and is one of the three largest providers of land mobile radio systems in the United States. It produces base stations, vehicular

^{1/}Notice of Proposed Rule Making, ET Docket No. 93-62, FCC 93-142, Released April 8, 1993.

mounted and portable transmitters that operate in various portions of the radio spectrum that are used by a variety of entities requiring communications capabilities.

In this proceeding, the FCC proposes to amend its regulations to use the new standard for RF exposure recently adopted by the American National Standards Institute ("ANSI") in cooperation with the Institute of Electrical and Electronic Engineers, Inc. ("IEEE").^{2/} This standard was adopted by ANSI in 1992 and, according to the Commission, is more restrictive than the 1982 standard that is currently specified in the Commission's rules for evaluating the environment effects of RF radiation. The Commission's actions are designed to fulfill its obligations under the National Environmental Policy Act of 1969 ("NEPA"), which requires Federal Agencies to evaluate the effects of their actions on the quality of the human environment. Accordingly, these FCC regulations are intended to ensure that, consistent with NEPA, any FCC regulated transmitters and facilities that expose workers or members of the general public to levels of RF radiation that are considered to be potentially harmful, undergo environmental processing.

As a manufacturer of land mobile equipment, any regulations concerning RF emissions, and the limitations thereon, may have an effect on E.F. Johnson's ability to manufacture and sell its products. The Company generally agrees with the approach taken by ANSI and proposed for adoption by the Commission. Nevertheless, it believes that modification to certain elements

^{2/}See NPRM at paragraph 1.

of the NPRM are warranted. Accordingly, E.F. Johnson is pleased to have this opportunity to submit the following Comments.^{3/}

II. COMMENTS

A. General

While the Commission's action is specifically prompted by the adoption of revised ANSI standards, it occurs against the backdrop of press reports of unsubstantiated claims concerning the harmful effects of RF radiation.^{4/} Accordingly, while the re-evaluation of the Commission's guidelines may be timely based upon the ANSI action, the FCC should not bow to unproven assertions in its consideration of this issue.

Many of the reported claims of harm from RF radiation are based upon the use of cellular telephones. Nevertheless, no public agency, based upon the available data, has been able to conclude that use of cellular telephones, or other similar communications devices, is unsafe. Similarly, studies conducted in other countries have also concluded that there is no health risk from the use of cellular phones. While work continues on additional studies designed to address the issues, there is no evidence that suggests that there is a health risk to the public from currently authorized radio equipment. The FCC should base its decisions on the scientific evidence available from ANSI and

^{3/}The Company's Comments are restricted to those subjects in which it has a direct interest and concomitant knowledge. It does not, therefore, address matters relating to broadcast facilities.

^{4/} *Los Angeles Times*, January 23, 1993, Part D (Business); Page 1; Column 2; *Chicago Tribune*, January 26, 1993, (NEWS); Page 1; Zone N; *The Atlanta Journal and Constitution*, January 26, 1993; (National News); § A; Page 1.

other credible sources, and should indicate to the public the acceptability of existing products.

B. Definition of Controlled and Uncontrolled Environments

According to the FCC, the 1992 ANSI guidelines specify two sets of exposure recommendations: one for controlled environments (generally involving workers); and another for uncontrolled environments (usually involving the general public). Exposure limits for controlled environments could be higher than those for uncontrolled environments based on the presumption that uncontrolled environments are those in which individuals have no knowledge of their exposure, while in controlled environments, those exposed are aware of their exposure.

E.F. Johnson is concerned that this formulation will lead some to conclude that in controlled environments, there are risks associated with RF exposure. To the contrary, the ANSI standards are premised on the understanding that the exposure limits for both the controlled and uncontrolled environments contain substantial safety margins and represent safe guidelines for human exposure to RF radiation.^{5/}

Nevertheless, if there are to be differences in permitted exposure levels based upon whether exposure occurs in a controlled or uncontrolled environment, the proposed rules would not ensure that those in controlled environments will, in fact, be aware of the potential for exposure. Accordingly, if the FCC will permit a class of persons to be exposed to devices that meet

^{5/}"IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz".

a less stringent standard, the Commission should specify measures to ensure that those who are expected to be aware of their exposure are, in fact, aware. Without such measures, the distinctions between controlled and uncontrolled environments are meaningless. If a licensee complies with the type of notification specified for those in a controlled environment, it should be free to operate, consistent with the approved guidelines.

In distinguishing between controlled and uncontrolled environments, and specifying the notification that will ensure that those in controlled environments are properly notified of their potential exposure, the FCC should focus on exposure as a basic element of employment or other commercial condition. As recommended by the Land Mobile Communications Council ("LMCC"), where the general public is likely to use or be exposed to the equipment, the stricter uncontrolled standards should apply. It is only in the workplace or commercial setting that the FCC can ensure, by specifying appropriate types of notification, that a licensee makes exposed persons "knowledgeable".

As a result of this formulation, users of public communications systems, such as cellular telephones, will be considered to use facilities in an uncontrolled environment, because there will be no effective means by which the FCC can ensure that public is notified of their exposure. Conversely, the FCC can specify appropriate notification for workers whose employment is predicated on the use of communications facilities that meet the less stringent standard for controlled environments

and thereby permit the use of that equipment by a licensee that employs those workers .^{5/}

C. Low Power Devices/Exclusions

The 1992 ANSI guidelines contain exclusions for low-power devices, which the FCC proposes to adopt. The 1992 guidelines provide an exclusion based on certain specific absorption rates ("SARs") or on the radiated power of the low power device. The guidelines also provide distinctions between controlled and uncontrolled environments and between different frequency bands. However, the exclusions based upon radiated power would not apply where the radiating structure is within 2.5 cm of the body.

E.F. Johnson supports the low power exclusion proposed by the Commission as a matter of administrative convenience. Nevertheless, because the low power exclusions are based upon the controlled/uncontrolled distinction, the Company reiterates its conviction that the FCC should adopt meaningful differences between the two. E.F. Johnson also recommends that the Commission adopt regulations that govern devices with radiating elements within 2.5 cm of the body, based upon radiating power and not SAR. The radiating power test will be less burdensome for both manufacturers and the FCC.

E.F. Johnson notes that the low power exclusion applies to devices that use frequencies below 1.5 GHz. Because, in the future, more low power devices may be developed that employ

^{5/}Although E.F. Johnson recommends the categorization of cellular telephone users as operating in an uncontrolled environment, under its formulation, with appropriate FCC approved notification, such users could be considered to operate in a controlled environment.

channels above 1.5 GHz (for example, Personal Communications Services), the Commission's guidelines should cover this higher spectrum as well.

D. Categorical Exclusions

In the past, the Commission exempted a number of transmitting facilities and operation from the NEPA requirement for routine evaluation. Because some of the current categorical exclusions may not be consistent with the 1992 ANSI guidelines, the Commission seeks comments on whether continuation of these categorical exclusions is appropriate.

E.F. Johnson favors the elimination of administrative burdens, where possible. Accordingly, it favors the continuation of categorical exclusions, where such exclusions are otherwise supported by scientific evidence. The Company expects that the low power exclusion for devices employed in an uncontrolled environment, will result in the exclusion of many of the same devices that were formerly categorically excluded. Nevertheless, it also favors exclusions, as suggested in the NPRM (at paragraph 21) for other devices that do not meet the low power exclusion in work environments where compliance with FCC mandated notification is achieved.

E. Alternative RF Exposure Guidelines

The FCC inquires whether there is a need to adopt exposure requirements different than those contained in the ANSI reports. It specifically asks whether it should incorporate the work of the National Council on Radiation Protection and Measurements ("NCRP") in its rules. While E.F. Johnson was not directly involved with the work of NCRP or other entities, it supports the

conclusion of the Telecommunications Industry Association ("TIA") of which it is an active member. TIA concludes that the composition of the ANSI committee represents the most competent of the expert scientists and bio-effect specialists in the world. It, therefore, supports the Commission's tentative conclusion to employ the ANSI guidelines as the basis for its rules.

F. Effective Date

The Commission proposes to continue environmental evaluations for those facilities and operations that are or will become subject to environmental processing with the current or new guidelines, depending upon the date of submission of the underlying application. The FCC also questions how to treat equipment that is in use but that does not comply with the new guidelines. Finally, the FCC asks how applicants should demonstrate compliance with the new guidelines.

E.F. Johnson recommends that the majority of equipment in use today, particularly those mobile and portable units employed in the land mobile industry, be "grandfathered". As noted above, there is no evidence that there is any danger to their continued operation. E.F. Johnson further agrees with TIA that a period of time will be necessary in the adoption of new rules for the industry to develop SAR measurement standards. Accordingly, it concurs with TIA that the effective date for compliance with the rules for portable radio units be two years after approval of an appropriate SAR measurement standard.

E.F. Johnson does not wish to burden licensees with additional application requirements. However, for devices approved only for use in controlled environments, applicants

should be required to state that they have taken the steps specified in the rules to ensure that the persons in the controlled environment are knowledgeable concerning their exposure. Only through such certification will the Commission be able to ensure that the device is actually used in a controlled environment. Where the equipment is acceptable for use in uncontrolled environments, the equipment manufacturer should be required to demonstrate compliance with exposure guidelines.

III. CONCLUSIONS

E.F. Johnson supports the FCC's action to update its regulations to conform to recent changes in the ANSI guidelines. The Commission should continue to look to responsible standards setting entities such as ANSI in this area. While the Company does not necessarily disagree with the controlled/uncontrolled dichotomy proposed by the Commission, the use of this division should not lead to the conclusion that exposure levels appropriate in controlled environments are dangerous. The FCC should assure the public that the exposure levels acceptable for all FCC approved devices is safe.

Because of the different levels of exposure permitted for controlled and uncontrolled environments, the FCC must specify the type of notification necessary to ensure that licensees employ devices in environments that are, in fact, controlled. Only once compliance with the control requirement is demonstrated, should a licensee be permitted to use equipment meeting the less demanding standards for an controlled environment. Because licensees will have no control over the use of devices in uncontrolled settings, it should fall to the

manufacturers to ensure compliance with the exposure standards for this equipment.

WHEREFORE, THE PREMISES CONSIDERED, the E.F. Johnson Company hereby submits the foregoing Comments and urges the Commission to act in a manner consistent with the views expressed herein.

Respectfully submitted,

THE E.F. JOHNSON COMPANY

By: *Russell H. Fox*

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Its Attorneys

Dated: January 26, 1994

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